

REMARKS

Claims 1-39 are presently pending in the present application. Applicants have amended claims 1, 4, 5, 15-21 and cancelled claims 2, 3, 6, 7, and 24. Accordingly, claims 1, 4, 5, 8-23, and 25-39 will be pending upon entry of the foregoing amendments.

Applicants have amended the claims to more succinctly claim particular aspects of the invention. Support for the amendments is found in the specification and the original claims. Accordingly, applicants submit that no new matter has been introduced by the amendments. Claims 2, 3, 6, 7, and 24 have been cancelled. Accordingly, the rejections to the same are now moot.

Claims 1, 2, 8-12, 21-23 were rejected under 35 U.S.C. § 102(b) as being anticipated by Jutard et al. (U.S. Patent No. 5,598,262 hereinafter "Jutard").

Independent claim 1, as amended, requires among other limitations the following limitations:

"a first light source configured to emit light onto the first side of the film in a first predetermined region of the film, the first light source being disposed at least partially within a first conically shaped region, the first conically shaped region extending from the first predetermined region of the film outwardly from the first side having an apex proximate the first predetermined region, the first conically shaped region being centered about a first axis, the first axis extending through the first predetermined region of the film generally perpendicular to the film, the first conically shaped region extending around the first axis at a first predetermined angle within a range of 0 to 60 degrees...

a first camera configured to receive a first portion of light reflected from the first predetermined region of film from the first light source and a second portion of the light propagating through the film from the second light source, the first camera being disposed at least partially within a second conically shaped region, the second conically shaped region extending from the first predetermined region of film outwardly from the first side and having an apex proximate the first predetermined region, the second conically shaped region being centered

about the first axis, the second conically shaped region extending around the first axis at a second predetermined angle within a range of 0 to 60 degrees..."

Referring to Jutard, the reference is directed to a device for inspecting transparent material. Jutard, however, does not provide any teaching of: "a first light source configured to emit light onto the first side of the film in a first predetermined region of the film, the first light source being disposed at least partially within a first conically shaped region, the first conically shaped region extending from the first predetermined region of the film outwardly from the first side having an apex proximate the first predetermined region, the first conically shaped region being centered about a first axis, the first axis extending through the first predetermined region of the film generally perpendicular to the film, the first conically shaped region extending around the first axis at a first predetermined angle within a range of 0 to 60 degrees", as recited in claim 1, as amended. Further, Jutard does not provide any teaching of: "a first camera configured to receive a first portion of light reflected from the first predetermined region of film from the first light source and a second portion of the light propagating through the film from the second light source, the first camera being disposed at least partially within a second conically shaped region, the second conically shaped region extending from the first predetermined region of film outwardly from the first side and having an apex proximate the first predetermined region, the second conically shaped region being centered about the first axis, the second conically shaped region extending around the first axis at a second predetermined angle within a range of 0 to 60 degrees", as recited in claim 1, as amended.

Accordingly, because Jutard does not teach each and every limitation of independent claim 1, as amended, and claims 8-12 which depend from claim 1, applicants submit that claims 1 and 8-12 are allowable over Jutard.

Independent claim 21, as amended, recites:

"summing the first and second digital images to obtain a summed image; and detecting a defect in the film based on the summed image."

Referring to Jutard, the reference does not provide any teaching of: "summing the first and second digital images to obtain a summed image; and detecting a defect in the film based on the summed image", as recited in claim 21, as amended.

Accordingly, because Jutard does not teach every limitation of independent claim 21, and of claims 22-23 which depend from claim 1, applicants submit that claims 21-23 are allowable over Jutard.

Claims 3-7, 13-20 and 24 were rejected under 35 U.S.C. 103(a) as being unpatentable over Jutard. As discussed above, applicants submit that Jutard does not provide any teaching of: "a first light source configured to emit light onto the first side of the film in a first predetermined region of the film, the first light source being disposed at least partially within a first conically shaped region, the first conically shaped region extending from the first predetermined region of the film outwardly from the first side having an apex proximate the first predetermined region, the first conically shaped region being centered about a first axis, the first axis extending through the first predetermined region of the film generally perpendicular to the film, the first conically shaped region extending around the first axis at a first predetermined angle within a range of 0 to 60 degrees", as recited in claim 1 and claims 4-7 and 13-20 which depend from claim 1.

Further, applicants submit that Jutard does not provide any teaching of: "a first camera configured to receive a first portion of light reflected from the first predetermined region of film from the first light source and a second portion of the light propagating through the film from the second light source, the first camera being disposed at least partially within a second conically shaped region, the second conically shaped region extending from the first predetermined region of film outwardly from the first side and having an apex proximate the first predetermined region, the second conically shaped region being centered about the first axis, the second conically shaped region extending around the first axis at a second predetermined angle within a range of 0 to 60 degrees", as recited in claim 1 and claims 4-7 and 13-20 which depend from claim 1.

Applicants note that the Examiner agrees that Jutard does not even mention predetermined angular ranges. See Office Action of 12/16/05, page 6, lines 4-5. Accordingly, Jutard cannot provide any teaching of positioning the system components within predetermined angular ranges. Further, applicants submit that the Examiner's assertion of inherency or obviousness, with respect to a specific positioning of the system components within conically shaped regions extending around an axis at a predetermined angle within in predetermined angular ranges, is completely unsupported and therefore improper.

Accordingly, because Jutard does not teach each and every limitation of independent claim 1, as amended, and claims 4, 5 and 13-20 which depend either directly or indirectly from claim 1, applicants submit that claims 4, 5 and 13-20 are allowable over Jutard.

Claims 25-39, were rejected under 35 U.S.C. § 103(a) based on Jutard in view of Soar (U.S. Patent No. 6,960,777, hereinafter "Soar"). Claims 26-31 depend from independent claim 25 and claims 33-39 depend from independent claim 32.

Applicants respectfully submit that a prima facie case of obviousness has not been established because no proper motivation has been identified for the combination of Jutard and Soar. In particular, Jutard is directed to a process for inspecting transparent material. Further, Soar is directed to a sensing mechanism to detect a type of paper (e.g., column 3, lines 47-59). However, since Soar is not even related to an inspection process for detecting defects in any media, one skilled in the art would not be motivated to combine the teachings of Soar with the Jutard system for detecting defects in a film. Accordingly, applicants submit that no proper motivation has been provided for the proposed combination.

Further, even if the teachings of Soar were somehow combined with the teachings of Jutard, the functionality of Jutard would be destroyed. In particular, if the light source (102) of Soar were utilized to replace the light sources (92) and (91) of Jutard, and the light source 104 of Soar was utilized to replace the light source (12) of Jutard, the resulting system would be inoperable. In particular, the resulting system would not utilize two light sources to illuminate a first side of a material as taught by Jutard to provide grazing illumination of the material. See Jutard, col. 3. lines 10-12 and lines. Further, the resulting system would not utilize a laser on an

opposite side of the material as required by Jutard, since Soar only teaches uses of LED's to illuminate the material. Accordingly, because the proposed combination would destroy the functionality of Jutard, applicants submit that no proper motivation has been provided for the proposed combination.

Accordingly, because no proper motivation has been provided for the combination of Jutard and Soar, applicants submit that claims 25-39 are allowable over these references.

Referring to claim 25, applicants respectfully submit that neither the Jutard nor Soar, alone or in combination, provide any teaching of: "a second camera disposed adjacent the second side of the film proximate the fourth light source that receives either transmissive or reflected light from the film and generates a second plurality of digital images of the film covering the first region of the film to the second region of the film as the film moves in the axial direction; and a signal-processing device operably coupled to the first and second cameras configured to detect the repeating defect in the film based on the first and second plurality of digital images", as recited in claim 25.

Applicants note that Examiner's assertion that it is inherent to duplicate the system of Jutard to increase the detection of defects, is unsupported and further technically incorrect. In particular, applicants note that even if two Jutard systems were utilized, both systems would only detect the same defects, since both would operate in an identical fashion. Accordingly, there would not be an increase in defect detection by such a system. As such, it cannot be inherent in the teachings of Jutard to duplicate the system of Jutard as suggested by the Examiner, when doing so would not result in any functional benefit and would undesirably result in an increased system cost.

Accordingly, because the combination of Jutard and Soar does not teach each and every limitation of independent claim 25, applicants submit that claim 25, and claims 26-31 which depend from claim 25, are allowable over the proposed combination.

Referring to independent claim 32, applicants respectfully submit that neither Jutard nor Soar, alone or in combination, provide any teaching of: "generating a second plurality of digital images of the film covering the first region of the film to the second region of the film using a

second camera disposed adjacent the second side of the film that receives either transmissive or reflected light from the film; and detecting a repeating defect in the film based on the first and second plurality of digital images", as recited in claim 32.

Accordingly, because the combination of Jutard and Soar does not teach each and every limitation of independent claim 32, applicants submit that claim 32, and claims 33-39 which depend from claim 32, are allowable over the proposed combination.

In view of the foregoing amendments and remarks, applicants respectfully submit that the instant application is in condition for allowance. Such action is most earnestly solicited. If for any reason the Examiner feels that consultation with applicants' attorney would be helpful in the advancement of the prosecution, the Examiner is invited to call the telephone number below for an interview.

If there are any charges due with respect to this Amendment or otherwise, please charge them to Deposit Account No. 50-3621.

Respectfully Submitted,
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